The Legacy of Avery Cardinal Dulles, S.J.—His Words and His Work In is a valuable book for scholars but also for the ordinary reader interested in learning more about the Cardinal’s influence on American life and the Catholic Church. The New York C.S. Lewis Society was blest by the presence, not only of a great man but of a holy man. In the words of Psalm 71:

O God, you have taught me from my youth, and till the present I proclaim your wondrous deeds; and now that I am old and gray, O God, forsake me not till I proclaim your strength to every generation that is to come.

Clara Sarroco
Dunwoodie, New York

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Book Reviews

The Sacred Cosmos: Christian Faith and the Challenge of Naturalism
Terence L. Nichols
Brazos Press: Grand Rapids [MI], 2003
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No one who pays even the slightest attention to what goes on around us in the world would care to deny that Christianity is hardly in a flourishing state today. The European Union is unwilling even to acknowledge the historical fact that Christianity had anything to do with the formation of European culture, and in the United States, although mere church attendance is higher than in Europe, Christians seem able to do little actually to shape the direction of the culture in which they live. Belief in the existence of God may be more widespread in the U.S. than in Europe, but it is not clear that as a society this does us much good. The existence of God seems to many to be something abstract, something one formally acknowledges, but which has little real effect in life. What is responsible for this sad state of things? Terence Nichols, professor of theology in the University of St. Thomas in St. Paul, Minnesota, has written an ambitious book attempting to trace this abandonment of religion to its source, and to refute what he considers to be its chief cause, which he identifies with naturalism, or the philosophy that holds that only nature, or matter, exists. Nichols upholds the main points of Catholic belief that can be arrived at through the use of reason, such as God's creation of the universe, the composite body/soul nature of man, the survival of the soul after bodily death, as well as the reality of miracles. This is a serious work in which the author critically confronts many fashionable contemporary philosophies and scientific theories, and tries to show either how they fit in best with Christian theism, or how they are in reality false.

Nichols begins his work by discussing the obvious and widespread fact of secularisation. “For the first time in history . . . most people in Europe do not pray or worship. They have lost the sense of a transcendent order, an order of truth, values, and reality beyond themselves” (p. 7). And although the United States might seem like an exception to this modern secular trend, Nichols is skeptical. “People may still believe in God, go to church, even pray, but without deep conviction” (p. 8). And lest anyone think that the widespread phenomenon of American evangelical Protestantism is a genuine exception to the
turning away of modern peoples from God, the fact that American Evangelicals have divorce rates as high, or even higher, than other Americans, and seem as committed to the endless acquisition of consumer goods, must make one wonder how much real religion is present here, or whether it is not some sort of emotional experience which is sought, or as Will Herberg suggested, that being a Protestant or a Catholic or a Jew in the United States is simply a way of participating in the primary and true American religion, the American Way of Life. In any case, few will question that the twenty-first century in the West is hardly a good example of fervent Christianity. But if this is so, what is its cause? Why has the West, once the chief locus of Christendom, become de-Christianised?

Nichols points out that sociologist Peter Berger, in his well-known book *The Sacred Canopy* (1967), "concludes that the cause and carrier of secularisation is the growth of scientific belief, which is an almost complete separation of God from everyday life that is so characteristic of contemporary secular societies. The main carrier of this has been modern natural science. Science came to understand nature as a mechanical system that operated more or less independently from God. (p. 9)

And therefore,

industrialism and capitalism were themselves the result of an earlier revolution, the revolution in understanding of God and nature. Ancient and medieval Christians lived in a sacred cosmos and saw nature as a window or sacrament that expressed the beauty, majesty, and glory of God. (p. 9)

But although modern science has been the prime "carrier" of secularisation, there is nothing, Nichols avers, about science in itself that militates against religious faith. Rather it is a spurious philosophy that has brought about secularisation. (p. 9)

The first theme explores the challenge of naturalism and the historical background that led up to it. . . . The second theme is the thesis that modern secularism stems from a developing chasm or dualism between God and creation. . . . The third theme is the thesis that Christian thought is a more adequate account of all the evidence . . . than is naturalism. . . . The fourth theme is that science and Christian theology are complementary, not conflicting. . . . (p. 10)

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early modern period. This resulted in the (perceived) separation of God from everyday life that is so characteristic of contemporary secular societies. The main carrier of this has been modern natural science. Science came to understand nature as a mechanical system that operated more or less independently from God. (p. 9)

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But although modern science has been the prime "carrier" of secularisation, there is nothing, Nichols avers, about science in itself that militates against religious faith. Rather it is a spurious philosophy, the "philosophy of naturalism," a philosophy that many scientists think is the natural accompaniment of any genuine science, but in fact is not. However, naturalism or materialism, "the belief that nature is all that exists and that everything can be explained by natural causes" (p. 10) is by no means a requirement for scientific research or a logical deduction from it.

Nichols then sets out "four prominent themes" which he will seek to develop:

The first theme explores the challenge of naturalism and the historical background that led up to it. . . . The second theme is the thesis that modern secularism stems from a developing chasm or dualism between God and creation. . . . The third theme is the thesis that Christian thought is a more adequate account of all the evidence . . . than is naturalism. . . . The fourth theme is that science and Christian theology are complementary, not conflicting. . . . (p. 10)

Since Nichols wants to show that modern science is in reality not opposed to theism or Christianity, toward the end of his first chapter he points out that Newton and many others of those who developed modern experimental science were Christian believers, and that Newton inserted in his *Principia* the statement that the beauty and order of the cosmos "could only proceed from the counsel and dominion of an intelligent and powerful being" (p. 21). But perhaps Nichols is not entirely correct here or even consistent with what he himself will say in his second chapter. For one can argue that the replacement of the Aristotelian philosophy of nature by the new mathematical science in itself makes it more difficult for man to turn his thoughts to God. Indeed, Nichols proclaims that "natural science must be committed to methodological naturalism" (p. 13), while arguing that what is merely a heuristic device should not be carried over into one's metaphysics. But it seems curious to me that we should thus divide our minds so that on the one hand we carry on our work as if God did not exist, while at the same time recognising that he indeed does. The fact that modern mathematical science has created this cultural divide from nature and thus from God is one of the reasons I am skeptical of those who claim that Christianity is responsible for modern science. This science grew up as the old Christian order weakened and began to collapse, and if any sort of theology seems especially akin to modern science, it is either Protestantism or deism. I will discuss this at greater length as we turn to Nichols' second chapter.
In chapter two, then, Nichols discusses the relationship between God and nature. He is concerned to argue for “the old idea of a sacramental unity between God and nature . . . not based simply on design, but on a hierarchy of being, in which the fullness of being, God, is reflected and expressed through created beings” (pp. 23-24). He points out that the biblical writers, of both the Old and New Testaments, as well as the Fathers and doctors of the Church, supported this view. Although nature is not divine, it does witness “to the glory and wisdom of God, the creator” (p. 26). Nichols traces this theme from Origen through Augustine, Thomas and Bonaventure. But with William of Ockham in the fourteenth century this begins to change. His rejection of universals entails a rejection of natures, and the ultimate result of this “is to replace a hierarchy of being with a hierarchy based on will or power” (p. 39). If something does not have a determinate nature or whatness of its own, what it is depends on who

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Although the author said earlier that the “real problem is not science; it is the philosophy of naturalism” (p. 10), one may question whether this is actually so. For “Ockhamism . . . laid the groundwork for . . . the emergence of modern science” (p. 40). And the many early scientists, such as Galileo, Kepler, Pierre Gassendi, Boyle, Newton himself, who were Christians (or in the case of Newton, an Arian) adhered to a theology that in fact divorced God from his creation, which “severed the unity of God and nature . . . and the commonality of being that we find in Aquinas” (p. 44), thus resulting in what Nichols calls “physico-theology.” It ultimately produced deism, with its watchmaker kind of God. In other words, modern natural science was a product of Ockhamism, a philosophy that struck at the heart of Christian metaphysics.

That he stood for, and perforce of Aquinas, that Galileo, Descartes and the other new philosophers strenuously sought. As the American Aristotelian philosopher, Henry Veatch, put it,

...the very rise of so-called modern science and modern philosophy was originally associated—certainly in the minds of men like Galileo and Descartes—with a determined repudiation of Aristotle: it was precisely his influence which it was thought necessary to destroy, root and branch, before what we now know as science and philosophy in the modern mode could get off the ground.

If this is so, then we may question Nichols’ attempt to separate naturalism as a philosophy from modern science. It is not that modern science requires a materialistic philosophy, but rather that its mode of inquiry, one which is concerned only with those aspects of things which can
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that he stood for, and perforce of Aquinas, that Galileo, Descartes and the other new philosophers strenuously sought. As the American Aristotelian philosopher, Henry Veatch, put it,

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If this is so, then we may question Nichols’ attempt to separate naturalism as a philosophy from modern science. It is not that modern science requires a materialistic philosophy, but rather that its mode of inquiry, one which is concerned only with those aspects of things which can be quantified, necessarily tends to remove God from an intimate relation with his creation and finally makes him simply the deistic watchmaker. In the circumstances of the time the new mathematical science displaced wholly the Aristotelian natural philosophy.

In the brilliant first chapter of his English Literature in the Sixteenth Century C. S. Lewis sketches the progress of mathematical science and its effects on man’s relationship with nature. Lewis wrote,

What was fruitful in the thought of the new scientists was the bold use of mathematics in the construction of hypotheses, tested not by observation simply but by controlled observation of phenomena that could be precisely measured. On the practical side it was this that delivered Nature into our hands. And on our thoughts and emotions . . . it was destined to have profound effects. By reducing Nature to her mathematical elements it substituted a mechanical for a genial or animistic conception of the universe. The world was emptied, first of her indwelling spirits, then of her occult sympathies and antipathies, finally of her colours, smells, and tastes. . . . The result was dualism rather than materialism. The mind, on whose ideal constructions the whole method depended, stood over against its object in ever sharper dissimilarity. Man, with his new powers became rich like Midas but all that he touched had gone dead and cold. This process, slowly working, ensured dur-
The next century saw the loss of the old mythical imagination: the conceit, and later the personified abstraction, takes its place. Later still, as a desperate attempt to bridge a gulf which begins to be found intolerable, we have the Nature poetry of the Romantics.3

But modern science must work by “reducing Nature to her mathematical elements.” That is the secret of its power, its power not to know things, but to manipulate them, to understand them only mathematically, to see only one dimension of their reality. Whatever could not be reduced to mathematics was in practice disregarded. It was of no interest to the scientist because his methodology did not know how to deal with it. Thus would seem to follow necessarily that fatal separation of God from nature. “In the process, nature came to be seen as resources to be manipulated and exploited for gain...” (p. 9). So I think it could be argued that the modern scientific enterprise, tracing its roots back far enough, in essence broke with a fundamental belief in the sacredness of nature and its being one with God. In contrast to the view that modern science has steadily annihilated the old notion of God, it was really only the God of the deists who was affected. But since the reductionist theology of the preceding three centuries had already limited God to a merely extrinsic relationship with the cosmos, he had come to be seen as nothing more than a necessary hypothesis to explain the order in our world. Natural selection seemed to do the job just as well, and to an age that was eager to throw off restraints, natural selection provided a more congenial mechanism for explaining order and complexity. Thus the one remaining argument for God could now be safely jettisoned. And at the same time, the “dualism” that the mathematical philosophy originally produced, could now also vanish. For with Darwinism man, including his mind, could be explained solely by material forces, a project that reached its logical conclusion with B. F. Skinner’s behaviourism in the twentieth century.

Of course the deathblow to atheism supposedly delivered by science did not really come in the twentieth century, but rather in the eighteenth century, with the appearance of the first strain of materialism. The effect was to remove man from the meaning of his existence, to dichotomize him from the meaning of his cosmos, and to set him as a mere atom in the vast universe. Naturally it is not acceptable to a theist, let alone a Catholic. Therefore, in the next chapter (chap. 3) Nichols sketches a way of understanding God’s relationship with creation that is based on the truth both of God’s immanence and transcendence. Here he suggests various ways of understanding God, including God as “being” and as “context,” and the notion that “God acts in nature and human life through the input of information” (p. 60). Some of what he says in this chapter is very close to Aquinas, especially his discussion of Aquinas’ doctrine of being as applied to God. Other aspects of the chapter seem more far-fetched and depend on contemporary information theory. But all in all Nichols is striving to present a “sacramental approach” to God, an approach that sees God acting in and through nature, all the while remaining nature’s Creator. God is distinct from his creation but not distant. “The Catholic philosophical tradition, especially that of St. Thomas, has understood...”
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Of course the deathblow to theism supposedly delivered by Darwinism applies only if we have accepted the deistic view of God, that is, if we see God as entirely separate from his creation and not united with it by a “hierarchy of being” (p. 47). This was “a vision of the world that [had] scarcely existed before in history, except for a few Greek atomists” (p. 47). Naturally it is not acceptable to a theist, let alone a Catholic. Therefore, in the next chapter (chap. 3) Nichols sketches a way of understanding God’s relationship with creation that is based on the truth both of God’s immanence and transcendence. Here he suggests various ways of understanding God, including God as “being” and as “context,” and the notion that “God acts in nature and human life through the input of information” (p. 60). Some of what he says in this chapter is very close to Aquinas, especially his discussion of Aquinas’ doctrine of being as applied to God. Other aspects of the chapter seem more far-fetched and depend on contemporary information theory. But all in all Nichols is striving to present a “sacramental approach” to God, an approach that sees God acting in and through nature, all the while remaining nature’s Creator. God is distinct from his creation but not distant. “The Catholic philosophical tradition, especially that of St. Thomas, has understood God as Being. And the scientific tradition, in such figures as Boyle, Newton, Kepler, and others, has understood God as the cosmic designer” (p. 67). I do not think that Nichols would deny that God is also designer of his creation. But only that in doing so he is not to be seen primarily as a craftsman, able to make something and then walk away. Rather, as he quotes St. Thomas, “it must be that God is in all things, and innermost” (p. 55).

Next, in chapter four, Nichols takes up the question of the origin of the universe. Here he discusses at some length the Big Bang theory, apparently accepting it, at least provisionally.

Thus the Big Bang theory nicely explains the development and evolution of the universe from the earliest times. But it leaves unanswered the big question: What was the origin of the Big Bang itself? Where did all the energy/matter come from? What caused the initial explosion? (p. 74)

He then surveys some of the explanations which astronomers or cosmologists have advanced in answer to these questions. With all due respect to the advocates of these theories, this reviewer had difficulty reading about them without a smile, for example, the notion that “there were previous universes that expanded and collapsed and rebounded in another expansion, thus forming an infinite series of successor universes” or the theory that the universe
“is self-creating,” of which theory there are “some fifty different versions” (p. 77). Nichols’ response to all this speculation is very reasonable: “naturalism has no answer for the biggest question of all: Where did the universe come from?” (p. 78), and concludes that “I am convinced that Christians can make a more reasonable case for their faith than naturalists can for theirs . . .” (p. 86).

All this is surely true. Yet perhaps the entertaining speculations of the cosmologists raise some other fundamental questions as well. Although Thomas Kuhn, in his *Structures of Scientific Revolutions*, is often criticised as having espoused an irrational and ultimately anti-intellectual position, on that he is said to have sought to undermine the very notion of objective truth, in actual fact in his book, while some passages do suggest he took that position with regard to scientific investigation, in other places he seems to be upholding a very old tradition, among whose representatives it to apply. Kuhn’s thesis, however, is akin to an idea as old as Plato’s *Timaeus*, that because of the special nature of the scientific investigation of nature, it is often impossible to arrive at a conclusion stronger than that of “saving the appearances,” i.e., providing a more or less plausible explanation of some natural phenomenon, an account which accords with, and might explain, what we see, but whose truth we do not and possibly can never fully determine. C. S. Lewis’s remarks on this, from one of his last books, *The Discarded Image*, are worth quoting at length.

The nineteenth century still held the belief that by inferences from our sense-experience (improved by instruments) we could ‘know’ the ultimate physical reality more or less as, by maps, pictures, and travel-books, a man can ‘know’ a country he has not visited . . .

Already, to be sure, mathematics were the idiom in which many of the sciences...
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Already, to be sure, mathematics were the idiom in which many of the sciences spoke. But I do not think it was doubted that there was a concrete reality *about* which the mathematics held good; distinguishable from the mathematics as a heap of apples is from the process of counting them.... We should [thus] have through math-
emetics a knowledge not merely mathematical. We should be like the man coming to know about a foreign country without visiting it. He learns about the mountains from carefully studying the contour lines on a map. But his knowledge is not a knowledge of contour lines....

It would be very different if someone were to say to him... 'But it is the contour lines themselves that are the fullest reality you can get.... All those ideas about "real" rocks and slopes and views are merely a metaphor or a parable;... permissible as a concession to the weakness of those who can't understand contour lines, but misleading if they are taken literally.'

And this, if I understand the situation, is just what has now happened as regards the physical sciences. The mathematics are now the nearest to the reality we can get. Anything imaginable, even anything that can be manipulated by ordinary (that is, non-mathematical) conceptions, far from being a further truth to which mathematics were the avenue, is a mere analogy, a concession to our weakness. Without a parable modern physics speaks not to the multitudes. Even among themselves, when they at-
tempt to verbalise their findings, the scientists begin to speak of this as making 'models'. But these 'models' are not, like model ships, small-scale replicas of the reality.... An expression such as 'the curvature of space' is strictly comparable to the old definition of God as 'a circle whose centre is everywhere and whose circumference is nowhere'. Both succeed in suggesting; each does so by offering what is, on the level of our ordinary thinking, nonsense. By accepting the 'curvature of space' we are not 'knowing' or enjoying 'truth' in the fashion that was once thought to be possible.

And Lewis concludes a few pages later: "We can no longer dismiss the change of [scientific] Models as a simple progress from error to truth. No Model is a catalogue of ultimate realities, and none is a mere fantasy."

When Nichols relates how the Big Bang theory tells us that just a fraction of a second after the Big Bang explosion "the universe would have expanded and cooled enough so that basic subatomic particles... began to exist as free particles," and that "[a]s the universe continued to expand, it also cooled; like a gas, as it doubled
in size, the temperature fell by half. After about three and one-half minutes... the temperature was about a billion degrees Centigrade" (p. 72)—when one reads such an account, can one, without espousing relativism or being ant-intellectual, can one ask simply, "How do you know? How could you ever know?" All the data that supposedly tells us this is based on hypothesis after hypothesis. We have the data, it is true, say a dial reading on a certain machine, but what does it mean? Can we have even probable knowledge that it reveals something to us that may have happened billions of years ago? Could we ever know what might have happened such long ages ago? But it is time to move on to Nichols' next topic, evolution, one which raises, however, similar questions of scientific epistemology.

In chapter five, then, Nichols takes up the question of evolution, from whose advocates, as he says, "the strongest arguments for naturalism have come." Therefore, "many Christians have rejected evolution altogether, and embraced so-called ‘creation science.’" But Nichols does not want to do this; rather he argues "that evolution does not have to be understood naturalistically, that is, as a purely natural and unguided process" (p. 89). He will maintain instead "that chance, physical laws, and natural selection, by themselves, are inadequate to account for the emergence of highly complex living systems" (p. 90). Thus Christians are able to give a better account of an evolutionary process than atheists or naturalists are.

Nichols devotes much of the chapter to a discussion of various hypothetical naturalistic evolutionary mechanisms, and then argues for "a theory of directed evolution, that is, evolution directed by intelligent agency" (p. 101). He relies on the work of microbiologist Michael Denton and others, and certainly adduces much evidence which casts doubt on the possibility of undirected naturalistic evolution. But while it is good that evidence against naturalistic evolution should be highlighted, I wonder if Nichols does not dismiss the creationist hypothesis too quickly. Certainly it is clear from the statements of John Paul II, and even from those of Pius XII, that Catholics may adhere to a theistic evolutionary position. But even though the theory of macroevolution in itself is not incompatible with Catholic faith, this does not necessarily mean that we should rush to embrace it; certainly we should not do so if our motive is mainly to avoid backward-looking criticism. For as a great deal of the reasoning which reveals its least questionable is that in theism of and the vast amounts of a theory of evolution is not as naive. If an option must be taken between evolution by a fossil record and a theory of evolution by natural means, then many different. A typical example is in his treatise on the Origin of Species, where we see that the so-called natural selection, as a purely scientific explanation, as in Human Nature, that the...
process” (p. 89). He will maintain instead “that chance, physical laws, and natural selection, by themselves, are inadequate to account for the emergence of highly complex living systems” (p. 90). Thus Christians are able to give a better account of an evolutionary process than atheists or naturalists are.

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After dealing with the evolutionary account of man’s development, our author turns his attention in chapter six to human nature, or rather to the specific question, “Do We Have Souls?” (p. 125). The entire chapter is devoted to a defence of the reality of the human soul, and a number of telling criticisms of reductionist and mechanistic views are made. Nichols discusses a number of points here that are worth commenting on. First, based on the work of biblical scholar James Barr, Nichols boldly and forcefully argues that the Bible does view the soul as separable from the body, despite the near unanimous opinion of Scripture scholars that “the Hebrews thought of the human being as a totality, a psychosomatic unity . . . [with] no separated soul to carry the personality after death, . . . the only hope for immortality [being] the resurrection of the whole person” (p. 128), and therefore that notions of the immortality of the soul originated with Greek thought. But this opinion, though common, is actually nothing but an academic fad, and clearly contradicts numerous passages of both the Old
and New Testaments, e.g., the calling up of the ghost of Samuel by the medium in Endor (1 Sam 28:15), Wisdom 3:1-3, and many passages from the New Testament. But Nichols makes clear that this teaching, often derided as dualism, is very different from the dualism of Descartes. As he says, “The ‘dualism’ of Aquinas was very different, and probably should not be called ‘dualism’ at all” (p. 131). The doctrine that sees man as a body/soul composite, the doctrine of Scripture and the Church, is often misunderstood by moderns, including philosophers, who assume that any defence of the existence of the human soul necessarily is a defence of Cartesian dualism. But it is precisely this Cartesian teaching which has led to the widespread rejection of the soul by most philosophers since the eighteenth century. After Descartes had separated the soul from the body, in effect, making each of them a different substance, connected somehow, it became comparatively easy for later thinkers to show

than its due is to start down the path to dismissing that thing altogether.

Earlier, in his chapter on the existence of God, Nichols had briefly mentioned a theory called emergentism. “This philosophy holds that as matter becomes more complex, especially in the human brain, consciousness, intelligence, intentions, and personality develop or emerge” (p. 50). At each new level of complexity “new properties emerge that are characteristics of the whole but that cannot be predicated of the parts” (p. 145). Emergentism, however, is really a form of materialism, however much it may attempt to disguise that fact. As Nichols says, it does not allow for either freedom of the will or immortality. One of the arguments that Nichols brings against emergentism, or any other form of materialism, is the argument which is also found in chapter three of C. S. Lewis’ Miracles.11 Nichols states it as follows:

is likewise determined to be what it is. I am not really free to change my mind. So it is hard to see why I should seriously consider his argument. He cannot argue otherwise than he does, nor can I respond otherwise than I do. If Crick is right, then all of our decisions are on the same level as the programmed decisions of a computer (p. 147).

This is one of the cleverest arguments against materialism, and while it does not prove that materialism is not true, it basically confirms that one need pay no attention to it, that it is philosophically irrelevant. Because if it were true, then not only all intellectual life, but nearly all human discourse would disappear or be rendered trivial. All a man could say was that he had wants, for food, sex, warmth, etc., and wanted to satisfy them. Human life would be reduced to the level of “Me hungry. Want food. Me get food now.”

In his next chapter, chapter seven, Nichols again argues...
Earlier, in his chapter on the existence of God, Nichols had briefly mentioned a theory called emergentism. "This philosophy holds that as matter becomes more complex, especially in the human brain, consciousness, intelligence, intentions, and personality develop or emerge" (p. 50). At each new level of complexity "new properties emerge that are characteristics of the whole but that cannot be predicated of the parts" (p. 145). Emergentism, however, is really a form of materialism, however much it may attempt to disguise that fact. As Nichols says, it does not allow for either freedom of the will or immortality. One of the arguments that Nichols brings against emergentism, or any other form of materialism, is the argument which is also found in chapter three of C. S. Lewis' Miracles. Nichols states it as follows:

If what [Francis] Crick writes in The Astonishing Hypothesis is true, it means his thoughts are determined to be what they are by the neural networks of his brain. And my reaction, whether of agreement or disagreement,
humans can think, and thinking is not something which material things, no matter how complex, can do. Our intellects thus introduce a qualitative difference in human beings. But Nichols says immortality is possible “because God establishes a relationship with the person early in his or her existence” (p. 168). Thus “the human soul is not naturally transcendent or immortal [but becomes so] through a divinely initiated gift of a personal relationship with God” (pp. 174-75). Although it is true that nothing, no soul or body or angel or any created thing could remain in existence for an instant if God did not uphold it in being, nevertheless it is not the case that the human soul does not by its nature survive separation from the body. Nichols says,

God, at some undetermined time, perhaps sometime at conception, perhaps after conception, enters into a relationship with the newly formed person. This personal relationship elevates the human soul to a condition of immortality.

tionships of God with the human soul, that of upholding it in being, that of seeking its salvation, and of course, the paramount relationship formed by baptism. But to suppose that any of these relationships is required to confer immortality would seem lacking in both theological and philosophical substance. In fact, Nicho-ols goes further, and in a manner that seems to this reviewer somewhat contradictory to what he said about the soul as the “holistic cause” of the body, asserts that God does not create a soul anew for each person, but seems to hold that this new relationship which God initiates with every person early on is the soul. “The new soul is not a ‘thing’ exactly. It is perhaps better described as a ‘subsistent relation’. . . ” (p. 176). Although he attempts to reconcile this with Catholic dogma, I do not think that he is successful in doing so. Evidently here a faulty philosophy and a faulty theology go hand in hand, to produce a suspect doctrine, acceptable neither to Catholics nor to many other religious beliefs.

disdain for miracles—they simply cannot and do not happen, any evidence to the contrary must be false. Nichols quotes an editorial from the English scientific journal, Nature, which states that “Miracles, which are inexplicable and irreproducible phenomena, do not occur—a definition by exclusion of the concept” (p. 185). In part this attitude is the result of David Hume’s infamous “definition” of a miracle as “a violation of the laws of nature” (p. 183). This of course biases the entire discussion at the outset. For as Nichols notes, “Medieval authors . . . , such as Aquinas, usually described miracles as praeter- naturam (beyond nature) rather than as contra naturam (contrary to nature)” (p. 189). But here I might introduce a further clarification which may advance our understanding of this question. When we say nature what are we talking about? About trees, and rocks and wild animals? Probably this is what the word means to most of our contemporaries. Probably this is not what the word means to a large number of religious believers. For them nature is a realm of divine creatures.
tionships of God with the human soul, that of upholding it in being, that of seeking its salvation, and of course, the paramount relationship formed by baptism. But to suppose that any of these relationships is required to confer immortality would seem lacking in both theological and philosophical substance. In fact, Nichols goes further, and in a manner that seems to this reviewer somewhat contradictory to what he said about the soul as the "holistic cause" of the body, asserts that God does not create a soul anew for each person, but seems to hold that this new relationship which God initiates with every person early on is the soul. "The new soul is not a 'thing' exactly. It is perhaps better described as a 'subsistent relation'..." (p. 176). Although he attempts to reconcile this with Catholic dogma, I do not think that he is successful in doing so. Evidently here a faulty philosophy and a faulty theology go hand in hand, to produce a suspect doctrine, acceptable neither to Catholic theology nor to sound philosophical reasoning.

Next, in chapter eight, Professor Nichols turns his attention to miracles. Probably that section of our intelligentsia (unfortunately the majority) which disdains God and religion has even a greater disdain for miracles—they simply cannot and do not happen, any evidence to the contrary must be false. Nichols quotes an editorial from the English scientific journal, *Nature*, which states that "Miracles, which are inexplicable and irreproducible phenomena, do not occur—a definition by exclusion of the concept" (p. 185). In part this attitude is the result of David Hume's infamous "definition" of a miracle as "a violation of the laws of nature" (p. 183). This of course biases the entire discussion at the outset. For as Nichols notes, "Medieval authors... such as Aquinas, usually described miracles as *praeternaturam* (beyond nature) rather than as *contra naturam* (contrary to nature)" (p. 189). But here I might introduce a further clarification which may advance our understanding of this question. When we say *nature* what are we talking about? About trees, and rocks and wild animals? Probably this is what the word means to most of our contemporaries. But if by *nature* we mean the total order of finite or created things, it has long seemed to me that it would be more precise to speak of natures, or the order of natures, rather than of nature in the singular, for the latter is a term that can easily confuse people. And if we do speak of natures in the plural, then perhaps the question of miracles will be more easily understood. For when Aquinas says that a miracle is *praeternaturam*, he means that it is beyond the nature, beyond the powers and capacity of a particular thing, as far as its ordinary mode of being and acting is concerned. Thus when our Lord multiplied bread and fish to feed the five thousand, neither bread nor fish had the power of multiplying itself. If we speak in this way we will avoid creating the impression that there is some vast and tightly interlocked system called nature which even God himself may not have access to, and that to tinker with one part means to disarrange the whole. Rather we have many specific things, each with its own nature, which has indeed its own proper powers, but which, by the omnipotence of God, can be enhanced or surpassed. We are not speaking somehow of a series of laws, but of a group of things, each of which has its own whiteness and thus its own powers. *Agere sequitur esse*, action follows being. The so-called "laws of nature" are simply mathematical generalisations of the activities proper to one or more created natures. But by the power of God the action proper to anything can be intensified or augmented, and thus we have miracles.
Nichols instances several accounts of miracles at Lourdes, events which cannot be explained except as miraculous, to show that miracles do indeed occur. But unfortunately he seems to want to account for them by resort to arcane scientific processes or to explain God's action in them (which he does not deny) by questionable means. For example, he writes that "God can act to specify quantum indeterminacies" or "it may be the case that in some extreme circumstances, such as the presence of great faith, the laws of nature, while not changed, behave differently than in ordinary contexts" (p. 190). This and other speculations the author puts forward in an effort to avoid the crude notion of a miracle as a "violation of the laws of nature." But, as I argued above, if we cease to talk about nature and speak instead of natures, then perhaps we can simply admit that in his omnipotence God enhances the powers and capacities of the various natures he has created. And indeed, in the end Nichols admits that we do not understand miracles, note that they do not involve any violation of any "laws of nature" and stop there. Quantum mechanics may be attractive at this time, but no one knows what its status as a reigning scientific theory will be in a hundred years.

In chapter nine, which is entitled "Christianity and Science, Conflict or Complementarity?" Nichols tries to show the ways in which theology and science are similar and dissimilar. He argues that theology and science can each help the other in its proper mission. He discusses various approaches which contemporary theologians take, including process theology, which he rejects. And he urges scientists not to extrapolate beyond their data.

It is also not clear why science has to assume that there can never be events that transcend natural causality or what we know of natural causality. How could scientists possibly know this?... No conceivable experiment could show that the rush of

physical law derives from the belief in a rational lawgiver, namely God" (p. 216). But as I argued above, this works equally well, perhaps even better, with deism as with theism. It seems to me that ultimately one's judgment on the relationship of modern mathematical science with Christian faith will depend on two things: one's estimate of the truth value of the knowledge obtained by modern science, and of the worth of the benefits to mankind conferred by it. One may wonder whether microwave ovens and atom bombs really represent the heights to which the human intellect can reach, and think instead that our fathers, both the Greeks and the mediaevals, put the human mind to nobler uses. Of course I am not denying the utility and necessity to mankind of technology in itself. But I am affirming that technology, coupled with the mathematical science which originated in the sixteenth century, aside from its effects on our relationship with the natural things around us and their Creator, have flooded the
miracles, note that they do not involve any violation of any "laws of nature" and stop there. Quantum mechanics may be attractive at this time, but no one knows what its status as a reigning scientific theory will be in a hundred years.

In chapter nine, which is entitled "Christianity and Science, Conflict or Complementarity?" Nichols tries to show the ways in which theology and science are similar and dissimilar. He argues that theology and science can each help the other in its proper mission. He discusses various approaches which contemporary theologians take, including process theology, which he rejects. And he urges scientists not to extrapolate beyond their data.

It is also not clear why science has to assume that there can never be events that transcend natural causality or what we know of natural causality. How could scientists possibly know this? ... No conceivable experiment could show that the web of natural causality is never transcended (p. 214).

He then argues that science actually needs theistic religion to validate the orderly universe which it assumes and studies. "The whole idea of natural and physical law derives from the belief in a rational lawgiver, namely God" (p. 216). But as I argued above, this works equally well, perhaps even better, with deism as with theism. It seems to me that ultimately one's judgment on the relationship of modern mathematical science with Christian faith will depend on two things: one's estimate of the truth value of the knowledge obtained by modern science, and of the worth of the benefits to mankind conferred by it. One may wonder whether microwave ovens and atom bombs really represent the heights to which the human intellect can reach, and think instead that our fathers, both the Greeks and the mediaevals, put the human mind to nobler uses. Of course I am not denying the utility and necessity to mankind of technology in se. But I am affirming that technology, coupled with the mathematical science which originated in the sixteenth century, aside from its effects on our relationship with the natural things around us and their Creator, have flooded the world with junk and gone far to poison our whole environment. If our technology ultimately kills us, it will not have profited us much.

Finally, in a short conclusion, Nichols recapitulates the four themes of his book that he mentioned in chapter one. He includes a moving account of how God changed an important facet of his life so that he could obtain his doctorate and teach theology. Nichols definitely wants to write as an orthodox Catholic, to call for an "intellectual conversion" (p. 225), to help end the warfare between most of the academy and traditional Christianity. I do not think he entirely succeeds in this effort, but he has achieved much. A more faithful adherence to Thomism in his philosophy, it seems to me, would have improved both his theology and his interpretation of science. For an unsound philosophy always leads to a false theology. But what Nichols sets out to do urgently needs to be done: to present the Catholic faith attractively to modern man, to highlight the myths of modern thought, to show how any real knowledge that modernity has obtained can be integrated with Catholicism without any real disturbance of its texture. This is part of the task of the Church in the new millennium, and if Nichols does not fulfill it perfectly, we should judge his work with leniency and learn from his mistakes how it might be done better.

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